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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,197	05/18/2005	Gilbert Raynaud	0509-1091	5679

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EXAMINER	
VETERE, ROBERT A	
ART UNIT	PAPER NUMBER
1792	

MAIL DATE	DELIVERY MODE
12/23/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/535,197	RAYNAUD, GILBERT	
	Examiner	Art Unit	
	ROBERT VETERE	1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 October 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *28-54* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *28-54* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of species C (claims 29-54) in the reply filed on 10/17/2008 is acknowledged.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 28-34, 39-41, and 50-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hove (5,582,639) in light of Turpin, Jr. (US 4,256,500, hereinafter "Turpin").

Claims 28-34: Hove teaches a method of producing concrete materials comprising the steps of: mixing coarse aggregates with a particles size distribution of 4/16mm with a bitumen-based emulsion without heating (claimed "cold," 4:51-67), mixing fine aggregates with a particles size distribution of 0/4mm with a binder (4:51-67) and mixing the coated coarse aggregates with the coated fine aggregates to form a mixture which can be stored or spread (5:1-15), wherein the bitumen based emulsion is a rapidly breaking emulsion (4:56-61) and that the emulsion is broken before the fine aggregates are mixed in (see, e.g., 4:1-8)

Hove also teaches that the fine aggregates can be coated without the use of an organic emulsion (4:34-37), but fails to expressly teach that the fine aggregates are coated with an inorganic emulsion and water. Turpin, however, teaches a method of producing concrete materials (3:43-46) wherein the fine aggregates are mixed with pozzolan and water in order to ensure maximum compressive strength in the final concrete product (2:15-20, 10:13-16). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have mixed the fine aggregates of Hove with pozzolan and water, as taught by Turpin, in order to have maximized the compressive strength in the final product.

Claim 39: Hove also teaches that the emulsion is a soft bitumen emulsion which is added before the fine particles are mixed (4:14-29). With respect to the penetrability of the soft bitumen, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected a commercially available type of soft bitumen.

Claims 40-41: Hove teaches that the percentage of bitumen in the final mixture is about 5 (5:14-16), but fails to state if this is a weight percentage. However, Hove also teaches that the amount of bitumen used in the mixture should be carefully controlled to avoid wasting any bitumen (see, e.g., 2:12-24). "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have minimized the amount of bitumen used such that only 0.5-2.5% of the final product by weight was bitumen with the predictable expectation of success.

Claims 50-52: Turpin also teaches that reducing the amount of make-up water used minimizes the void content of the cement composition (4:50-53) and that utilization of the appropriate amount of water insures maximum compressive strength (2:15-20). "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have minimized the amount of water used to less than 2% by weight of the mixture in order to have limited the void content of the product.

Turpin also teaches that the ratio of inorganic binder to total aggregates is 0.05-2.0 (4:12-15).

Claims 53-54: Hove also teaches that the coarse granular fraction is 60% of the combined coarse and fine granular fractions (4:51-55). With respect to the percentage of fine granular fraction combined with inorganic binder, it is inherent that the combined method of Hove and Turpin would have been between 6 and 15% of the elements with a size less than 80 μm because the combined method of Hove and Turpin teaches the same method as that claimed in claim 54.

4. Claims 35 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hove and Turpin in light of Redelius (US 5,256,195).

Claims 35 and 37: Hove fails to teach whether the bitumen emulsion is anionic or cationic. Redelius teaches a process for forming a bitumen emulsion used as a binder in road materials (Abst.) wherein the emulsion is either anionic or cationic (Abst.) and use is made of a amphoteric agent (1:23-34). Thus, because Hove is silent as to the type of bitumen emulsion used, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used an anionic or cationic emulsion because both are known to one of ordinary skill in the art with the predictable expectation of success.

5. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hove and Turpin in light of Redelius and further in light of Esser et al. (US 4,629,757).

Claim 36: Redelius fails to teach the ratio of amphoteric agent to cationic agent used in the bitumen emulsion. Esser teaches a bitumen emulsion useful for road-building (1:46-55) comprising cationic agents and amphoteric agents wherein the ratio of amphoteric agent to cationic agent is between 4:1 and 4:6 (see Table, e.g., column "M"). The selection of a known material based on its suitability for its intended use supported a prima facie obviousness determination in *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). Thus, because Hove and Redelius are silent as to the relative amounts of cationic and amphoteric agents in the bitumen emulsion, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the ratio taught by Esser with the predictable expectation of success.

6. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hove and Turpin in light of Kessick (US 4,392,944).

Claim 38: Hove fails to teach that a breaking agent is used to facilitate the breaking of the emulsion. Kessick teaches that it is well known in the art to use slaked lime to break bitumen emulsions (3:67-4:3). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used slacked lime in the method of Hove to break the bitumen emulsion completely with the predictable expectation of success.

7. Claims 42-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hove and Turpin in light of Thomas et al. (US 6,599,057) and Fukushima et al. (US 4,008,095).

Claims 42-44: Hove fails to teach that the coarse aggregates are washed with water before treatment. Thomas teaches a method of forming a road-coating material comprising mixing granules with an emulsion wherein the granules are first washed to separate the coarse granules from the fine granules, which are both then used in the process (claimed "recycling," 3:40-50). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have washed the granules in the method of Hove in order to separate the coarse granules from the fine granules to be used in the process.

Thomas, however, is silent as to the material used to wash the particles. Fukushima teaches a method of producing an asphalt composition (Abst.) comprising granule aggregates wherein the granules are washed with water (see, e.g., 21:41-45). The selection of a known material based on its suitability for its intended use supported a prima facie obviousness determination in *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used water to wash the granules with the predictable expectation of success.

8. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hove and Turpin in light of Thomas.

Claim 45: Thomas further teaches that the washing of the coarse granules also separates the medium granules from the coarse and fine granules to be mixed with the emulsion (3:60-51). Furthermore, Hove teaches that by adding a finer aggregate to the coated coarse aggregate after it has been coated allows the emulsion to break more readily (3:25-40). Finally, the selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results. *In re Gibson*, 39 F.2d 975, 5 USPQ 230 (CCPA 1930). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have mixed the medium granules with the coarse granules after the coarse granules had already been mixed with the emulsion with predictable expectation of success and to further ensure the breaking of the emulsion.

9. Claims 46-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hove and Turpin in light of Huege et al. (US 5,512,093).

Claims 46-48: Hove fails to teach that the granules are first treated with an inorganic composition. Huege teaches a method of improving the properties of an asphalt mix by treating the aggregate which is combined with a bitumous binder with lime (Abst., 1:47-55). Huege further teaches that the lime comprises about 1% of the total weight of the dry aggregates (1:47-55), that the lime used is slaked (2:45-59) and that the lime can be applied either before (3:63-67) or during coating of the coarse aggregates (4:3-10). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included slaked lime in the coarse mixture to improve the properties of the asphalt produced.

With respect to the limitation that the lime is recycled for further use, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have recycled the unused lime in order to have minimized the costs of the procedure.

10. Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hove and Turpin in light of Thiery et al. (US 4,994,114).

Claim 49: Hove and Turpin fail to teach that the pozzolan binder's composition. Thiery teaches a method of selecting a pozzolan binder for use in concrete (Abst.) wherein the pozzolan is metakaolin and the amount of metakaolin is selected to confer the best mechanical properties on the final material in relation to the amount of lime used (1:35-42). "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected an appropriate ratio of metakaolin to lime in the pozzolan binder in order to confer the best mechanical properties on the final product.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT VETERE whose telephone number is (571)270-1864. The examiner can normally be reached on Mon-Fri 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cleveland can be reached on 571-272-1418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert Vetere/
Examiner, Art Unit 1792

/Michael Cleveland/

Supervisory Patent Examiner, Art Unit 1792